

sentence - will be in force in his invention. (The deleted sentence was written as follow: "the invention can be applied to and improve many other devices, structures and systems").

J. From his last telephone conversations with the examiner Mr. John B. Walsh, and the Supervisor Mr. Zarni Maung and the Supervisor Mr. Etienne Ario (SPE), the applicant understood that all that he has to do now in his response is to put brackets or **strike-through** marking in claim 50 and to delete the last sentence from the abstract.

Remarks (1)

1. This complete listing of all the claims was taken from the Examiner's Office Action mailed to the applicant in the date of **August 8, 2005**.

In the claims:

Kindly amend claim 50 as follows:

Claim 50 (previously added, currently amended).

A motion transmission and multiplication system for use with systems, devices or ~~or~~ and structures that require movement of segments, to enable extendable and retractable motion, ~~such as to be used with~~ cleaning systems, measuring systems, hand-movable tools, music instruments and accessories, electrical and telecommunication devices, transportation and delivery systems, shades, sailing boats, chairs, tripods, tables and tents, said motion transmission and multiplication system comprising: at least first and second hand-movable elements each having anterior and posterior ends, said elements extending in the same orientation, each element having at least one point thereon connectable to a tool or other object; and at least a first means linking said first and second elements and being movable with respect to at least one of them, said first linking means also being connectable to an additional element, said first linking means being arranged on said elements such that when said first linking means is moved with a controllably reversible driving motion with respect to either of said anterior and posterior ends of a selected reference one of either of said first and second elements, wherein said driving motion is in a direction in-line with said orientation, then said first and second elements, and if connected, said additional element are simultaneously provided with a controllably reversible and multipliable, non gravity dependent, linear-to-linear driven motion with respect to each other in-line with said orientation, said driven motion being in the same direction as said driving motion, or reverse thereto, in accordance with which reference one of said first and second elements was selected in respect of said driving motion.

Applicant had already submitted to former Examiners **A. Knight and Ackerman**, via the responses of **July 11, 2001** and **April 25, 1999**, remarks to some of the same prior art cited again in the latest Office Action, e.g., Pipes, White and Sandberg.

The Examiner has rejected claims 1-3, 5, 8, 16-18, 36, 38 41-42, 45 and 47 under Sec. 103(a) as being unpatentable over Pipes in view of Wilding.

Pipes discloses a shuttle assembly of elements placed alongside one another with chains (66) mounted on sprocket wheels (48, 49, etc.). Pipes does not lend itself to driving motion provided by hand, and as the Examiner concedes, Pipes does not disclose controllably reversible motion.

Wilding discloses an automatic storage system having conveyor apparatus for handling particulate products such as peanuts or cereal. An electronic controller 25 is applied to control the conveyor movements using electronic sensors such as a photocell, see col. 5, lines 29-32, and col. 6, lines 53-57.

The application of an electronic controller to automated control systems as in Wilding can hardly be compared with the simple, controllably reversible motion provided by the system of the present invention. This is because as now recited in amended claim 1, the inventive system is hand-movable, meaning it can be moved by hand, while heavy, automated systems are typically not designed for manual operation. Therefore, an automated system such as Wilding does not provide a relevant teaching in this case and is not a basis for comparison, being electronic.

It would therefore be unreasonable to consider the combination of Pipes and Wilding as rendering the claims obvious, since a skilled person would not be prompted to combine them nor consider this combination to be obvious.

The Examiner has rejected claim 50 under 35 U.S.C. Sec. 103(a) as being unpatentable over Pipes in view of Wozniak.

The differences between pipes and the present invention are described in this response.

The differences between Wozniak and the present invention are:

Wozniak discloses a hand turning device.

In contrary to Wozniak, the present invention discloses a Hand-movable-slidable device that can multiply, in a direction in-line the movement of a sliding hand movement while moving with the same hand to any other direction while sliding, (fig. 1-6,19,26,53) and even by a leg sliding movement (fig 54 - the drum)

It is clear, that Wozniak's device is not a hand/leg operating device which moves in a direction in-line with a movement of a sliding hand/leg movement and is not an operation device like the present invention.

The Examiner has rejected claims 1-3, 5, 8-12, 16-19, 23 and 40 under Sec. 103(a) as being unpatentable over White in view of Wilding.

White discloses a collapsible structure which employs an arrangement of sprocket wheels and chains to allow telescopic movement of a sectioned structure. As can be seen by a careful reading of White, the telescopic elements (20, 23, 24 and 25) are on the upper portion of the structure, while the mechanism providing movement, including the chain 43, is below and separate from this.

This is unlike the invention, where the linking means is "arranged on the said (first and second) elements".

In addition, the requirement in White for wheels carrying the chains is not a requirement of the present invention. For example, Figs. 7-9 of the specification of the present invention show a linking means without chains comprising a single, double-toothed sprocket wheel, which converts the driving motion to a driven motion. Even 78 years after White was published, the practical applications do not exist and are also very different from those of the present invention.

The Examiner concedes that White does not disclose the use of a controller. Wilding, as stated above, is not applicable here for controlling the movement, since Wilding teaches an electronic controller for automated control systems, rather than the simple, controllably reversible motion

provided by the system of the present invention. An automated system such as Wilding does not provide a relevant teaching in this case and is not a basis for comparison, since it is an electronic device.

It would therefore be unreasonable to consider the combination of White and Wilding as rendering the claims obvious, since a skilled person would not be prompted to combine them nor consider this combination to be obvious.

The Sandberg reference, for its teaching of a hand crank, is not a basis for rejection since it adds nothing to the overall system of telescopic motion as presented by the invention. Sandberg teaches a fire escape within which only the extension motion which raises the ladder is controlled, while the retraction motion is not controlled and is provided by gravity. A hand crank in a gravity-dependent system does not teach controllably reversible motion, nor does it teach how this could be achieved in combination with other components. Applicant respectfully requests that the Examiner carefully reconsider the scope of the invention, as now claimed, with respect to the limited teaching of Sandberg.

In summary, the present invention provides a tool attached to a telescopic system not requiring a support base, with the system enabling, from either end of the system, hand-movable, controllably reversible driving motion in-line with the orientation of the elements, and controllably reversible, non-gravity dependent, linear-to-linear driven motion. Such a system is deemed not to have been obvious since the teachings of Pipes, White, Wilding and Sandberg do not disclose this, or even suggest such a combination, nor do they disclose an attached tool or object for performing useful work.

The motion of the linking means in the invention is adjustably multipliable, with the linking means adjustably arranged on the elements, as can be seen in Figs. 10-15b, 22, 24, and 30, etc.

As mentioned previously, the ability to reverse the driving and driven motions gives the present invention the advantage of having a design which solves the problems of reaching both high and low areas. Since these particular problems were not solved by the prior art, the invention cannot be deemed to be obvious.

As for the Examiner's statement that the Applicant insists on arguing for claims of a scope that is not patentable, is respectfully maintained by the Applicant that the patentability of the pending claims is a matter to be decided by the Patent Office, and ultimately, the courts, but clearly, the intent is to achieve the broadest claims possible, as allowed by law.

Since the concept of the invention has many and varied applications, some of which may be developed in the future, Applicant wishes to have the broadest claim possible to allow for claim coverage wherever applicable.

The provision by the present invention of reversible directions of driving and driven motions is deemed not to have been obvious, since the prior art does not disclose this, nor does it disclose a device like that of the present invention.

In citing the prior art references under Sec. 103(a), the question is raised whether the references themselves would suggest the invention, as stated in the decision of *In Re Lintner* (172 USPQ 560, 562, CCPA 1972):

"In determining the propriety of the Patent Office case for obviousness in the first instance, it is necessary to ascertain whether or not the reference teachings would appear to be sufficient for one of ordinary skill in the relevant art having the references before him to make the proposed substitution, combination or other modification."

Similarly, *In Re Regel* (188 USPQ 136 CCPA 1975) decided that the question raised under Sec. 103 is whether the prior art taken as a whole would suggest the claimed invention to one of ordinary skill in the art. Accordingly, even if all the elements of a claim are disclosed in various prior art references, the claimed invention taken as a whole cannot be said to be obvious without some reason given in the prior art why one of ordinary skill would have been prompted to combine the teachings of the references to arrive at the claimed invention.

Simply put, and as stated in *In re Clinton* (188 USPQ 365 CCPA 1976), "do the references themselves ... suggest doing what appellants have done", such that there is a requirement that the prior art must have made any proposed modification or changes in the prior art obvious to do, rather than obvious to try.

It is respectfully put forward by Applicant that there is not any substantial reason to view the cited references as making the Invention obvious, since none of them, individually or in combination, suggests reversible directions of driving and driven motions, as provided by the invention. To say that this feature is obvious to try, or a design choice, as the Examiner seems to do, is one thing, but to recognize the above-outlined design advantages is another thing.

Therefore, independent claim 1 is deemed to be patentable over the prior art, and the dependent claims are likewise deemed patentable being based thereon.

The Examiner has rejected claim 4 under 35 U.S.C. Sec. 103(a) as being unpatentable over White in view of Wilding as applied to claims 1-3, 5, 8-12, 16-19, 23, and 40 above, and further in view of Sandberg.

In the response of the July 11, 2001, Applicant's former patent lawyer, Ed Langer, has made these amendments and wrote:

Claim 1 has been amended. Claim 4 has been deleted. Thus, claims 1-3 and 5-49 remain in the case.

The specification has been amended to overcome the objection under 37 CFR 1.71 and 35 USC 112, by the addition of the term "hand-movable" at page 8, line 14. This amendment replaces the previously suggested terminology, "hand-holdable" and it is believed that "hand-movable" is more precise and clearly understood, since it means that the elements may be moved by hand.

As will be clear from a careful reading of the specification, Applicant was in possession of the subject matter of the claimed invention at the time of filing the application, especially in relation to the hand-movable aspect. For example, at page 8, line 16 it is stated that "the roller and pipe are operated by holding the fixed handle 114 in one hand, and operating the activation handle 116.....with the other hand." The illustration of this activity is clear from Figs. 5 and 6 where a man is shown operating the segments of telescopic tool 100, and this shows that the device is hand-movable.

Additional illustrations of this activity include Fig. 26 where a shoulder-belt mounted pipe is arranged for fruit picking, and as stated at page 21 line 18 "it is possible to use one hand that will move the activating handle..." Similarly, regarding the sail boat mast at page 51 line 18, it is stated, "a lifting arm 918 is connected to the top of the second segment 906 for the user to reach it by handle 920", so that it is clear that the sailboat mast segment is operable by hand motion, therefore, it is hand-movable.

Furthermore, the recitation of "hand-motion" in claim 4 clearly means "hand-movable", and this has now been incorporated in claim 1, and claim 4 deleted.

Therefore, there can be no question as to whether the telescopic tool is hand-movable, and this new terminology should be acceptable and should not be considered new matter, since it is clearly based on the initial specification, claims and drawings.

As stated in the previously filed Remarks, the object of the present invention is to overcome the problems of existing products exhibiting telescopic movement. The invention provides a system of telescopic elements for multiplying the effective physical work achieved by the telescopic motion of various structures, with many applications including cleaning systems, vacuum cleaners, measuring rods, tools, paint rollers, wall scrapers, music stands and instruments, parasols, shades, curtains, sailing boat masts, and structures such as chairs, tripods, tables, tents, etc.

By way of a quick review, the previous amendments to claim 1 have already incorporated the following features:

- 1) simultaneous driving and driven motion of linking means and first and second elements;
- 2) driving motion of the linking means is controllably reversible;
- 3) driven motion of said first and second elements is non-gravity dependent;
- 4) both extension and retraction motion of the elements are under full, reversible and multipliable control of the mechanism;
- 5) motion of the elements is in-line with their orientation, achieving linear-to-linear driven motion; and
- 6) The elements are connectable to a tool or other object.

As now amended, independent claim 1 incorporates another feature previously recited in claim 4. This feature defines the relationship between the directions of driving and driven motion, such that when driving motion is applied between an end of a selected one of the first and second elements, and the linking means (loop), there results one of two types of extension and retraction motion, with driven motion developed either in the same, or reverse direction.

As mentioned in the previously filed Remarks, examples of this motion are described in the text, with reference to Figs. 1-6.

The advantage of this operation is described in the text at page 8, last paragraph, through page 9, line 12, with reference to Figs. 1-6. In one case, where the operating hand moves the handle opposite the motion of segment 106, the user reaches greater distances, "which is good for working at heights..." In another case, where the operating hand moves in the same direction as the segment 104, this arrangement is "effective for working in lower places". Thus, it can be seen that the inventive tool solves a particular problem at high and low locations, and it is solved by this unique motion.

Thus, as per amended claim 1, the ability to select the direction of the driven motion, via application of driving motion with respect to an end of a selected one of the segments during extension or retraction, gives the present invention unique advantages over the prior art. The importance of this feature is that it defines the directions of the driving motion and the driven motion, depending on which of the first or second element is selected as the end with respect to which the driving motion is applied to the linking means.

If the driving motion is applied to the linking means with respect to the first element, it is clear that the first element is held fixed in place. Alternatively, if the driving motion is applied with respect to the second element, it is clear that the second element is held fixed in place. This choice is then the basis for the direction of the resulting driven motion, and it serves to highlight the versatility of the inventive device, as it can be operated from either end of the first and second elements.

Thus, in the case of two nested elements, the end of the narrow, inner element or the larger, outer element can be held, and the device operated such that the other element is provided with driven motion. The tool or other object then benefits from the motion imparted to the element provided with driven motion, in the direction selected.

It is respectfully put forward by Applicant that there is not any substantial reason to view the cited references as making the invention obvious, since none of them, individually or in combination, suggests reversible directions of driving and driven motions, as provided by the invention. To say that this feature is obvious to try, or a design choice, as the Examiner seems to do, is one thing, but to recognize the above-outlined design advantages is another thing.

Therefore, independent claim 1 is deemed to be patentable over the prior art, and the dependent claims are likewise deemed patentable being based thereon.

In view of the foregoing amendments and remarks, all of the claims remaining in the application are deemed to be allowable. Further reconsideration and allowance of the application is respectfully requested at an early date.

Respectfully submitted,

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